



Montana Department of Transportation
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Construction Memorandum

To: District Construction Engineers

From: Paul Jagoda, P.E.
Construction Engineering Services Engineer

Date: April 2, 2004

Subject: Vegative Buffer Zones

Vegative Buffer Zones (VBZ) are a new tool added to our toolbox of erosion and sediment control Best Management Practices (BMPs). The use of VBZ should be determined in the preliminary design phase of the project and included in the plans of selected projects but may also be implemented during construction on a case-by-case basis. VBZ are a natural and aesthetically pleasing BPM that uses existing vegative, agricultural or natural geological features to control sediment and erosion on construction projects in selected and designated areas. VBZ may be located within MDT right-of-way or leased private lands.

Attached are:

1. Help Guide for implementing VBZ.
2. VBZ questions and answers.
3. Contact list for VBZ information and assistance.

This memo is rescinded five years from the date of issuance if not updated.

PJ/tc

CC:	Paul Ferry, PE	Greg Hahn	Jake Goettle	Mark Wissinger, PE	Joel Marshik, PE
	EPMs	CES Bureau	Lisa Durbin, PE	DAs	FHWA Operations Engineers
	Phil Johnson	Jean Riley, PE	John Horton	Paul Brown	DESS
	DPE	Jim Walther, PE	Area Project Supervisors		

Attachment #1-VBZ Help Guide

Overview:

A Vegetative Buffer Zone (VBZ) is a new erosion and sediment control best management practice (BMP) tool. The VBZ may be located within MDT right-of-way (R/W) or leased private lands. Leased private lands are acquired through a Vegetative Buffer Zone Permit. MDT may lease vegetated private lands or State lands adjacent to MDT's R/W for use as sediment and erosion control. The VBZ will be used when it is cost effective.

The new VBZ BMP combines portions of two Detailed Drawings 208-02 and 208-26. Reference the "EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES: FIELD MANUAL" drawings and descriptions, SS-2 (Preservation of Existing Vegetation) for DD 208-02 and SS-14 (Vegetative Buffer) for DD 208-26. The following information is directed primarily towards private lands that are leased for VBZ, but this information can be used as a general guide for VBZ that are within MDT right-of-way.

VBZ Site Determinations:

Ideal locations for VBZ are long stretches of vegetative lands adjacent to our R/W that are suitable for trapping sediment and do not have any defined or only minor drainage areas. Typically the VBZ will not be a stand alone BMP, but used in conjunction with other BMP enhancements. Visualize areas that traditionally received long runs of silt fence to prevent sediment from migrating onto adjacent property. Look for long, low height embankments with planned slope ratios gentler than 3:1, and lands approaching riparian areas. The recommended minimum length of each permit is approximately one-quarter mile long. The recommended minimum width is approximately 20 feet (for 20:1 in-slopes and denser stands of vegetation). Contact MDT's Erosion Control Engineer or Agronomist for assistance in determining the need of width. Target big parcels of land under single party ownership. Avoid asking for lands with multiple ownerships, and lands with small parcel owners. The lands should either have vegetative cover or provide physical or topographic features that stop or inhibit sediment transport.

The VBZ permitting process will be conducted by the R/W Bureau.

Water rights are not acquired for VBZ, as we are looking for existing stands of vegetation.

Use in dry upland areas with low sediment transport potential. The VBZ must be monitored for sediment movement; if sediment transport is excessive, additional BMPs may be required.

VBZ Design and Permitting Process:

VBZ will be permitted through the construction permit process already established and use federal-matching funds. R/W will use a VBZ permit form.

The VBZ permitting process will be the same for all construction projects of the various funding sources, including full Federal Oversight and full State Oversight.

Recognize the need for a VBZ during the Preliminary Field Review (PFR). Discuss the application with the DCE, DA, DESS, DPE, Area Project Supervisor and the Agronomist. Utilize discussion opportunities again at the Alignment & Grade Review (A&G) and at the Plan-in-Hand (PIH).

The PFR, A&G, & PIH report writers will submit the VBZ acquisition requests to MDT's Erosion Control Engineer (ECE). The ECE will provide the R/W Bureau Chief (R/WBC) with the particulars needed for the permit. The R/WBC will negotiate for the VBZ permit and notify the Road Design Engineer (RDE) and ECE of its status. The RDE will authorize the VBZ permitted areas to be shown on the Plan & Profile sheets. The R/WBC will provide VBZ permits to the districts before the letting.

The MDT Erosion Control Engineer or Agronomist will provide the width guidelines based on adjacent land slope, vegetative cover, and other physical features. The VBZ should be delineated in the design plans and erosion control plans and included in the project's SWPPP.

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If the VBZ is not included in the plans, the Engineering Project Manager (EPM) is to add the location of the VBZ to the as-built erosion control plans. The VBZ will be marked /staked in the field on an as-needed basis at the discretion of the EPM.

Assure the VBZ areas are not disturbed by construction activities. Review the requirements set forth in the R/W agreement/VBZ permit and SWPPP.

Attachment #2-VBZ Questions and Answers

1. Can I still acquire a VBZ permit just prior to a letting or during construction if I missed the preliminary process?

Yes. Contact your MDT District R/W agent and Erosion Control Engineer. Ask for help with the VBZ agreement form and some advice. If successful, show this modification in the Storm Water Pollution Prevention Plan (SWPPP).

2. How long is the VBZ to be protected?

The VBZ is to be protected until the adjacent area has reached "final stabilization" and the Notice of Termination has been filed with DEQ.

3. Why would MDT want to use a vegetated buffer zone?

A vegetative buffer zone:

- Is another BMP tool,
- Natural and aesthetically pleasing BMP,
- Save the taxpayers money on reducing the quantity of material (silt fence usually),
- Reduce Contractor installation time & expense,
- Reduce MDT construction engineering overhead,
- Reduce MDT inspection, bookkeeping, measurement and payment expenses,
- Reduce DEQ and other regulatory agencies overhead,
- Reduce maintenance costs of removing silt fence.
- Reduce long runs of soil disturbances caused by removing silt fence.

4. In what areas or circumstances should a VBZ not be used for?

- Do not utilize VBZ in drainages, as they will not meet the SWPPP requirements.
- Do not acquire a VBZ in place of buying or replacing R/W on fill slopes, cut sections,

snow use slopes, or fill (embankment) slopes.

- Avoid asking for lands with multiple ownerships, and lands with small parcel owners.
- Do not create a VBZ to allow extensive sediment discharge off the true project limits.
- Do not condemn for VBZ.

5. Does a VBZ have to be leased lands?

No. VBZ can be within MDT R/W. Reference Detailed Drawing 208-26.

6. How do I get the VBZ Permit Form?

Contact your R/W agent.

Attachment #3-VBZ Contact List

Primary Contacts:

Jake Goettle-Erosion Control/Construction Permitting Engineer

Phil Johnson-Agronomist

Greg Hahn-R/W

District Engineering Services Supervisor (DESS)

District Construction Engineer

District's Construction Engineering Services Reviewer.

Secondary Contacts:

Jean Riley-Environmental Section

Paul Ferry-Highways Engineer

Paul Jagoda-Construction Engineering Services Engineer

District R/W